

5. (Original) A device according to claim 4, wherein said partial response is determined adaptively.

6. (Original) A device according to claim 4 or claim 5, wherein said output equalizer (20) is a decision feedback equalizer or a Viterbi equalizer.

7. (Original) A device according to claim 1 or claim 2, wherein said means (11, 12) include, at the digital adapter (5) end, an n-level selector (14), n being equal, particularly, to 64, said levels being represented in the form of a byte, from among $N = 256$ possible quantization levels, said level selector (14) being connected, at its input, to the user's equipment and, at its output, to a digital interface.

8. (Original) A device according to claim 3, wherein said transmitter (16) of the analog adapter (6) includes a line coder (27) followed by a predistortion filter (24) which synthesizes a partial response, in particular a class IV response.

9. (Original) A device according to claim 8, wherein said partial response is determined adaptively.

10. (Original) A device according to claim 1 or claim 3 wherein the digital adapter (5) includes a decoder (30) connected, at its input, to an echo filter (22) and to the output of the digital interface of the digital adapter (5), said decoder (30) delivering at its output to the user's equipment (9) the most likely sequence of groups of bits transmitted by the analog adapter (6), given the echo of the signal produced by the digital adapter (5).

11. (Canceled)

12. (Currently Amended) Method of transmission from an analog adapter (6) to a digital adapter (5) in a communications system, said method including the steps of:

- taking a group of bits originating from a data source connected to the communications system;
- selecting an analog signal having an amplitude corresponding to the digital value of said group of bits the signals corresponding to successive groups interfering with one another and having a shape such that, at the moment when said analog signal is sampled in the analog interface of the exchange, its value said analog signal is substantially equal to the sum of a value to be determined by the digital information item transmitted by the analog adapter (6) to the digital adapter (5), and of the echo of the signal transmitted by the digital adapter (5), without said value having to be equal to a level of the quantization law, so that following the sampling of the analog signal, a byte appears in the digital adapter (5), representing the said sum;
- processing the successive bytes so as to retrieve the most likely sequence of the groups of bits, given the echo of the signal transmitted by the digital adapter;
- transmitting the digital value of the groups of bits retrieved to the equipment of the user.

13. (New) A device for communication between a digital adapter (5) linked to an exchange (3) by means of a digital interface (7), and an analog adapter (6) linked to an exchange (4) by means of an analog interface (8), said exchanges (3,4) being linked by means of a telecommunications network (2), wherein said device includes at least a means (15) for receiving digital information from the digital adapter (5) being sent to the analog adapter (6) at a rate of at least 8000 digital information bearing symbols per second, wherein said means (15) forms a portion of the analog adapter (6) and includes an adaptive linear equalizer that forms an a partial response output.

14. (New) The device according to claim 13, wherein the information in each information bearing symbol is a group of bits originating from a digital data source and each information bearing symbol is as voltage level determined by choosing one voltage level from among a plurality of voltage levels that corresponds to the group of bits, a sequence of the voltage levels each said voltage level represented in digital form by one byte and being transmitted 8000 times per second.